HANDBOOK OF PHONOLOGICAL DATA FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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825 Digueno

825 01 p[01]
[p-unreleased][60]
[p-aspirated][61]
(free)

825 02 t-dental[05,06]
[t-laminal-unreleased][07,62]
[t-dental-aspirated][61]
(free)

825 03 t[08,30]
[t-aspirated][61]
(free)

825 04 k
[k-unreleased][09,63]
[k-aspirated][61]
(free)

825 05 k-labialized[10,31]

825 06 q[11,32]
(limited)
[q-aspirated][61]
(free)

825 08 t/s-hacek[12]
[t/s-hacek-aspirated][61]
(free)

825 09 beta[01,13,33]
[b][64]
(free)

825 10 s-dental

825 11 s[14]

825 12 x[16]

825 13 x-labialized[10,31]

825 Digueno

14 m[01]
[m-syllabic][66]
[p-prenasalized][17,67]

15 n-dental[05,06]
[t-dental-prenasalized][17,67]

16 n[08,34]

17 n-palatoalveolar

18 l[19]

19 l-fricative[19,35]

20 l-laminal[20]

21 l-fricative-laminal[20,35]

22 r-trill[21,36]

23 r-approximant[22]

24 glottal stop[25,37]

51 iota[26,68]
(tag(+),free,allo)
*/schwa/
[e-mid][27,69]
[epsilon][28,70]
(allo,free)
*/schwa/
*/a/

53 e-long
[iota-long][71]
(allo,free)

825 Digueno

54 schwa[29,38]
*[iota]
*[epsilon]
*[a]
*[upsilon]
*[caret]

55 a[40,72]
(tag(+),free)
*[epsilon]
*/schwa/
[ash][41,73]
[caret][29,74]
(allo,free)
*/schwa/
[alpha-unrounded][75]
[alpha][43,76]

56 a-long

57 upsilon[43,77]
(tag(+),free,allo)
*[o-open]
*/schwa/
[o][81]

58 o-long[43]
*[o-open-long]
[upsilon-long][78]
(free)

59 o-open[39,43,79]
(limited,allo,free)
*/upsilon/

60 o-open-long[43,44,80]
(limited,free)
*/o-long/

61 w[45]

62 yod

825 $a Digueno $b Mesa Grande $B Ipai $d Yuman $e S California $f 10-100 $g Merritt Ruhlen $g Marc Okrand (review) $g John Crothers (editor)

825 $a Langdon, Margaret $b 1970 $c A Grammar of Dieguenoː Mesa Grande Dialect $f (UCPL 66) $g Berkeley: U. C. Press $q informants $r 2 years

825 $a **LAX CONSONANTS** $A In connected discourse and casual style, some additional phones may occur. "A syntactic suffix consisting of a single voiceless consonant, when in absolute word-final position and directly following a long stressed vowel or a voiced consonant, may be pronounced voiced and lenis or be otherwise reduced." (p.76) The possible alternants of the well-attested cases include: (1) fortis [t/s-hacek] varying with lenis [t/s-hacek] varying with voiced (and lenis) [d/z-hacek] varying with voiced (and lenis) [d]; (2) fortis [k] varying with lenis [k] varying with voiced (and lenis) [g]; (3) fortis [s-dental] varying with lenis [s-dental] varying with voiced (and lenis) [z-dental] (and, in the speech of one informant, varying with [yod]). (p.76)

825 $a **PHONOLOGICAL WORD** $A Only one CC cluster may occur in pre-stress position. Vowel clusters are possible, but not with /schwa/. Langdon says that clusters of four C occur, though this is inconsistent with the syllable canon. (p.23)

825 $a **STRESS** $A "All Digueno words have one syllable that is more prominent in loudness and pitch than all other syllables of the word. This syllable is called the stressed syllable...[and] the place of stress is fully predictable within the word, regardless of its structural complexity. The rule may be stated as follows: Stress the last syllable of the word unless its vowel is both final and short or /schwa/, in which case stress the next to the last syllable whose vowel

is not /schwa/." (p.15-16) Although stress is predictable, it plays a crucial role as a conditioning environment in phonological rules. Thus, rules may make reference to "stressed" and "unstressed" syllables. $A Phonetic aspects of stress: (1) Loudness: "the stressed vowel of a word is louder than any of the other vowels of the same word. Among vowels preceding the stressed one, long vowels tend to be somewhat louder than short vowels and unstressed short vowels in initial syllables of words of more than two syllables not containing long vowels in unstressed position tend to be slightly louder than other unstressed vowels. Vowels following a stressed vowel are least loud of all...." (p.17) (2) Pitch (in "a neutral style of speaking" (p.17)): "(a) When all vowels in the word are short or when only the stressed vowel is long...[except as in (b) below], the stressed syllable is on a higher pitch than preceding ones. These in turn are roughly on an even, lower pitch level.... (b) Syllables containing long unstressed vowels or a short vowel followed by /glottal stop/ are higher in pitch than the unstressed vowels described in [(a)]. The pitch level may be the same as that of the stressed syllable or slightly lower.... (c) A stressed syllable containing a short vowel followed by a word final /glottal stop/ is always higher in pitch than preceding parts of the word...[In words with stress on other than the last syllable,] syllables following the stressed one are lower in pitch than any of those that precede it." (p.18-19) (3) Consonant length: "In intervocalic position before stress, consonants are occasionally longer than in other positions...." (p.19) [MO]

825 $a **SYLLABLE** $A (C)V(:)(C)(C) $A initial C: any C or G $A initial CC: one word has an initial cluster, which can be considered a reduced form. (p.23) $A final C: any C or G except /glottal stop/ $A Unstressed syllables occurring before the stressed syllable have the canonical form (C)V(C). The initial consonant may be any consonant or glide. The unstressed vowel may be any vowel (long or short). The final consonant may be any non-glottal consonant. An additional unstressed syllable type has a glottal stop or glide syllable-finally. This type is restricted to /a.yod/, /a-long.yod/, /a.glottal stop/ and /a.yod.glottal stop/.

825 $a **TENSE CONSONANTS** $A "All consonants are typically fortis and clearly released." (p.26)

825 $a **VOWELS** $A "The vocalic units of Diegueno may best be described as forming two distinct, though overlapping systems: stressed vowels and unstressed vowels.... Stressed vowels, whether short or long, ...are stable in quality and their allophony can be readily described. This characteristic is also shared by unstressed long vowels. Short unstressed vowels, on the other hand, are often considerably reduced and unstable in quality. Under certain conditions, which are not as yet fully understood..., some of them may be omitted altogether." (p.33) Furthermore, short unstressed vowels tend "to be centralized toward [schwa] with variations in quality often predictable on the basis of the environment. Some short unstressed vowels, however, have a quality that cannot be predicted from the environment and contrast with other short unstressed vowels, so that the tendency to neutralize short-vowel contrasts in unstressed position is not unvarying." (p.36)

825 01 $A "Bilabials...have lip spreading rather than lip rounding." (p.26-27)

825 05 $A /t-dental, n-dental/ "may be interdental for some speakers." (p.28)

825 06 $A "In some instances of the dentals /n-dental/ and /t-dental/, I have observed some contact of part of the blade with the upper part of the teeth and the gum, in addition to the pure apicodental contact." (p.27)

825 07 $A It is not easy to reconcile the description "laminodental" for [t-laminal-unreleased] with the claimed assimilation to /t/s-hacek/. [JHC]

825 08 $A "Alveolars are apicoalveolar or very slightly postalveolar." (p.27)

825 09 $A "The forms exhibiting this sequence [stressed vowel followed by /k.p/] were at first often recorded without the /k/ which is almost inaudible to me in that position. When these forms were repeated, however, without the velar closure, they were never acceptable to native speakers." (p.29)

825 10 $A /k-labialized, x-labialized/ have "bilabial voiced release." (p.29)

825 11 $A /q/ is described as "postvelar." (p.25)

825 12 $A /t/s-hacek/ is described as "lamino-postalveolar in point of articulation throughout." (p.29)

825 13 $A "[beta]...is the only voiced spirant and the only consonant that is always lenis." (p.29-30)

825 14 $A /s/ is "pronounced with great tenseness, with the apex almost touching the upper edge of the alveolar ridge, which gives it "for some speakers a very distinctive 'whistling' quality." (p.30)

825 16 $A /x/ is "occasionally somewhat fronted" before or after /iota/ or /e-long/. (p.30)

825 17 $A [p-prenasalized] and [t-dental-prenasalized] are "released in the manner of a stop..., i.e., the nonnasal articulation of the following stop is anticipated before the release of the

bilabial [or dental] articulation." (p.28)

825 19 $A For /l, l-fricative/ "the apex is raised to touch the alveolar ridge." (p.31)

825 20 $A For /l-laminal, l-laminal-fricative/ "the apex...is lowered to touch the back of the lower teeth with the blade contacting the alveolar ridge." (p.31)

825 21 $A /r-trill/ is "very similar to Spanish 'r.'" (p.32)

825 22 $A /r-approximant/ has "the same articulatory position as /s/, but is voiced and much less tense." "In acoustic perception, it is similar to English 'r,' but somewhat more tense and occasionally spirantal." (p.32))

825 25 $A Morphophonemically, /glottal stop/ functions as a "glide" rather than as a "consonant." (p.26)

825 26 $A /iota/ is "particularly short" in the diphthong /iota.w/, especially after /s/ or /yod/. (p.33)

825 27 $A [e-mid] may also be somewhat higher, or a lowered [iota].

825 28 $A [epsilon] as an allophone of /a/ is somewhat lower and more central in the diphthong /a.yod/ when not preceded by a palatoalveolar or blade-alveolar.

825 29 $A In two words, in post-tonic syllables, the sequence /schwa.yod/ occurs, but otherwise /schwa/ does not enter into diphthongs. In the two exceptions, /schwa/ varies freely with [caret]. (p.41)

825 30 $A /t/ "does not occur word-initially. It is most common in the position immediately following the stressed vowel." (p.43)

825 31 $A /k-labialized, x-labialized/ "can only be syllable-initial and pre-stress." (p.43)

825 32 $A "/q/ is quite rare, not easily distinguishable from /k/ for some speakers. In fact, it is unambiguously present as a phoneme (in clear contrast with /k/) only in the speech of my oldest and linguistically most conservative informant. It was never recorded before...[/iota/ or /e-long/] or in other than stressed syllables. It is suggested that /q/ is disappearing from the language." (p.29)

825 33 $A /beta/ "occurs only in some of the syntactic suffixes..., i.e., in the position immediately after the stressed syllable of the word, beginning the next unstressed syllable, since it is always followed by a vowel. This restricted distribution makes its phonetic characteristics somewhat less deviant as it occurs only in least stressed position." (p.30)

825 34 $A /n/ is "very rare in word-initial position and is not attested before [/iota/ or /e-long/]." (p.43)

825 35 $A /l-fricative/ and /l-laminal-fricative/, "even after long exposure, are still very hard for me to differentiate acoustically, in spite of the clear difference in articulation." (p.31)

825 36 $A /r-trill/ is "fairly rare in native words." (p.32)

825 37 $A /glottal stop/ is "most common in word-initial position, it is never last member of pre-stress clusters. It does not occur after stress except (predictably) after a short stressed vowel in final position in imperative forms." (p.44)

825 38 $A "/schwa/ is...the one phoneme that is always unstressed, never long, and accounts for all cases of unstressed vowels whose quality is either [schwa] or is predictable from its environment." (p.37) For further discussion on the status of /schwa/, see p.36-41.

825 39 $A /o-open/ contrasts with /upsilon/ in "only three root morphemes." (p.35)

825 40 $A /a/ is somewhat backed.

825 41 $A [ash] is somewhat lower than normal higher-low quality.

825 43 $A /upsilon, o-long, o-open, o-open-long/ and [alpha] are described as "bilabial" vowels, and "bilabials including vowels have lip spreading rather than lip rounding." (p.25-26) Phonetic symbols for rounded vowels only are used for these vowels and their allophones, and, therefore, they are treated here as "round" vowels.

825 44 $A /o-open-long/ contrasts with /o-long/ in "only three root morphemes." (p.35) For some speakers, [o-open-long] alternates with [o-long] in final position. (p.35)

825 45 $A /w/ is not explicitly described, but given as a phonetic symbol only. It is classed as a "bilabial" phoneme (p.25), all of which "have lip spreading rather than lip rounding."

(p.26-27) Since /w/ is not specifically characterized as "unrounded," however, it is here given the description normally associated with the phonetic symbol [w], that is, "round."

825 60 $A /p/ is unreleased "when following a stressed vowel and in turn followed by /m/." (p.28)

825 61 $A "Stops are...optionally slightly aspirated in final position." (p.26)

825 62 $A /t-dental/ is realized as [t-laminal-unreleased] "following a stressed vowel and in turn followed by /t/s-hacek/." (p.28) ("anticipating the articulatory position of the following segment." (p.28))

825 63 $A /k/ is unreleased "when following a stressed vowel and in turn followed by /p/." (p.29)

825 64 $A "After /m/, /beta/ may have an allophone [b], freely varying with [beta]." (p.30)

825 66 $A /m/ is syllabic "in word-final clusters when preceded by a stressed vowel plus /p/." (p.28)

825 67 $A /m/ is realized as [p-prenasalized] before /t-dental/, /n-dental/ as [t-dental-prenasalized] before /k/. (Though [p-prenasalized] is characterized as "frequently" occurring (p.28), [t-dental-prenasalized] is not so qualified; it "has the same characteristics of stop release as /m/." (p.28))

825 68 $A In unstressed syllables preceding the stressed syllable of a word, [iota] is a free variant of /schwa/ before palatoalveolars and blade-alveolar laterals, and after palatoalveolars and blade-alveolar laterals when the following consonant is bilabial, velar or uvular. Following /w/ and before a palatoalveolar or blade-alveolar lateral, or following a palatoalveolar or blade-alveolar lateral and before /w/, [iota] varies freely with [upsilon] as well as [schwa]. (p.38) In unstressed syllables preceding the stressed syllable of a word, between palatoalveolars and/or blade-alveolar laterals, /schwa/ is always [iota]. (p.38) In unstressed syllables following the stressed syllable of a word, /schwa/ is always [iota] before palatoalveolars or blade-alveolar laterals. (p.41) (Only /t/s-hacek/ and /l-laminal-fricative/ are attested following /schwa/ in post-tonic syllables. (p.41))

825 69 $A /iota/ is realized as [e-mid] in a stressed syllable when preceded by a bilabial consonant and followed by an apicoalveolar. (p.33)

825 70 $A /iota/ is [epsilon] in unstressed syllables following the stressed syllable of a word. (p.41) [epsilon] is a free variant of /schwa/ before dentals; between dentals, /schwa/ is always [epsilon]. (p.38) /a/ is [epsilon] before /yod/, or following /yod/ and before a palatoalveolar or blade-alveolar lateral. (p.34)

825 71 $A Word-finally, /e-long/ is [iota-long] "after a /w/ or a labiovelar" (that is, /k-labialized/ and /x-labialized/). (p.33) Word-finally, following a segment other than /w/ or a labiovelar, [iota-long] varies freely with [e-long]. (p.33) (All word-final long vowels are stressed.)

825 72 $A In unstressed syllables preceding the stressed syllable of a word, [a] is a free variant of /schwa/ before velars, and after velars when the following segment is not a palatoalveolar or blade-alveolar lateral. (p.38)

825 73 $A /a/ is realized as [ash] in stressed syllables, between palatoalveolar consonants and/or blade-alveolar laterals. (p.34)

825 74 $A /a/ is realized as [caret] in stressed syllables, before /r-approximant/. (p.34)

825 75 $A /a/ is realized as [alpha-unrounded] in stressed syllables, before apicoalveolars other than /r-approximant/, or before /q/. (p.34)

825 76 $A /a/ is realized as [alpha] in a stressed syllable and "between /w/ and /m/, /k/, or /x/." (p.34)

825 77 $A In unstressed syllables preceding the stressed syllable of a word, [upsilon] is a free variant of /schwa/ before /w/ unless the following vowel is /upsilon/ or /o-long/, and after /w/. Following /w/ and before a palataolveolar or blade-alveolar lateral, or following a palatoalveolar or blade-alveolar lateral and before /w/, [upsilon] varies freely with [iota] as well as [schwa]. (p.38) In unstressed syllables following the stressed syllable of a word, /schwa/ is always [upsilon] between velars. (p.41) (In post-tonic syllables, the only relevant sequence attested is /k.schwa.x/, according to Langdon's description. An example, however, contains the sequence /k.schwa.k/. (p.4))

825 78 $A [upsilon-long] alternates freely with [o-long] in final position. (p.35) (All word-final long vowels are stressed.)

825 79 $A In stressed syllables, /upsilon/ "is lowered to...[o-open] before or after /q/." (p.34) In unstressed syllables following the stressed syllable of the word, /upsilon/ is always [o-open]. (p.41) "There is free variation between [upsilon] and [o-open] in the following situations: when followed by an [apico] alveolar or /x/ and in the diphthong...[/upsilon.yod/] and at the

same time either word-initial or preceded by /glottal stop/, an [apico] alveolar, or /z/." (p.34)

825 [80] $A [o-open-long] varies freely with /o-long/ when prececed by an apicoalveolar and followed by /yod/ in the same syllable. (p.35) (The diphthong /o-long.yod/ occurs only in word-final, stressed syllables.)

825 [81] $A /upsilon/ is realized as [o] in a stressed syllable, before /w/ in the same syllable. (p.34)